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Stormwater Management Plan
City of Archdale
NCS000434

March 5, 2020



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PART 1: INTRODUCTION

The purpose of this Stormwater Management Plan (SWMP) is to establish and define the means by which the City of Archdale will comply with its National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit and the applicable provisions of the Clean Water Act to meet the federal standard of reducing pollutants in stormwater runoff to the maximum extent practicable.

This SWMP identifies the specific elements and minimum measures that the City of Archdale will develop, implement, enforce, evaluate and report to the North Carolina Department of Environmental Quality (NCDEQ) Division of Energy, Minerals and Land Resources (DEMLR) in order to comply with the MS4 Permit number NCS000434, as issued by NCDEQ. This permit covers activities associated with the discharge of stormwater from the MS4 as owned and operated by the City of Archdale and located within the corporate limits of the City of Archdale.

In preparing this SWMP, the City of Archdale has evaluated its MS4 and the permit requirements to develop a comprehensive 5-year SWMP that will meet the community's needs, address local water quality issues and provide the minimum measures necessary to comply with the permit. The SWMP will be evaluated and updated annually to ensure that the elements and minimum measures it contains continue to adequately provide for permit compliance and the community's needs.

Once the SWMP is approved by NCDEQ, all provisions contained and referenced in this SWMP, along with any approved modifications of the SWMP, are incorporated by reference into the permit and become enforceable parts of the permit.

PART 2: CERTIFICATION

By my signature below I hereby certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

I am also aware that the contents of this document shall become an enforceable part of the NPDES MS4 Permit, and that both the Division and the Environmental Protection Agency have NPDES MS4 Permit compliance and enforcement authority.

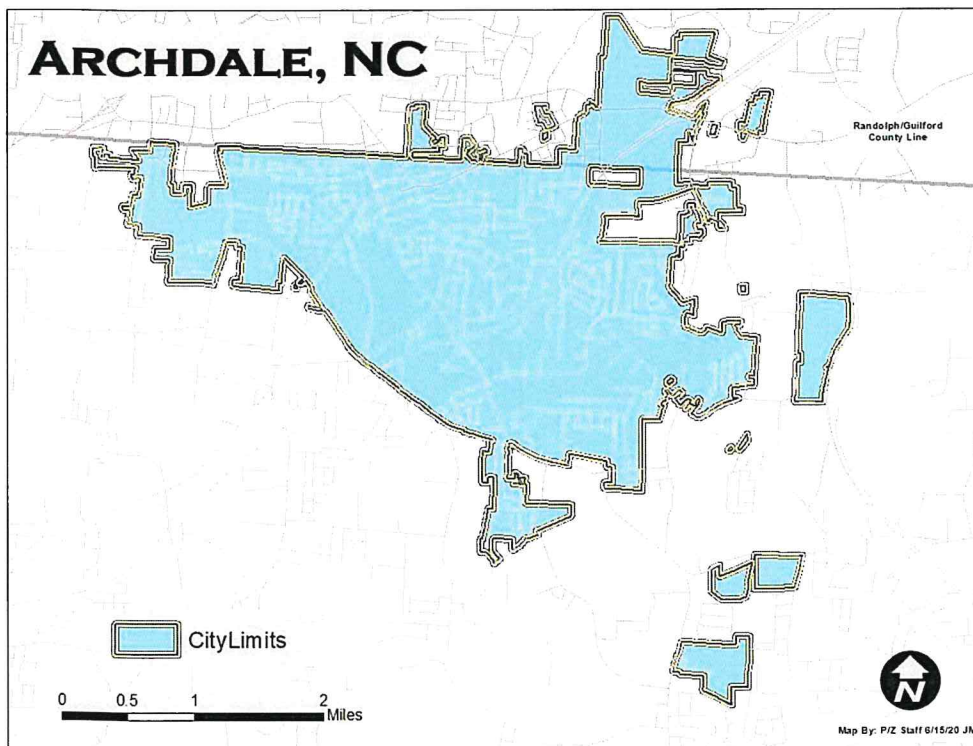
- ☐ I am a ranking elected official.
- ☐ I am a principal executive officer for the permitted MS4.
- ☒ I am a duly authorized representative for the permitted MS4 and have attached the authorization made in writing by a principal executive officer or ranking elected official which specifies me as (*check one*):
- ☒ A specific individual having overall responsibility for stormwater matters.
- ☐ A specific position having overall responsibility for stormwater matters.

<i>Signature:</i>	
<i>Print Name:</i>	<i>David Joseph Señeres</i>
<i>Title:</i>	<i>Stormwater Manager, PE, PWLF</i>
Signed this 5th day of 2020 .	

PART 3: MS4 INFORMATION

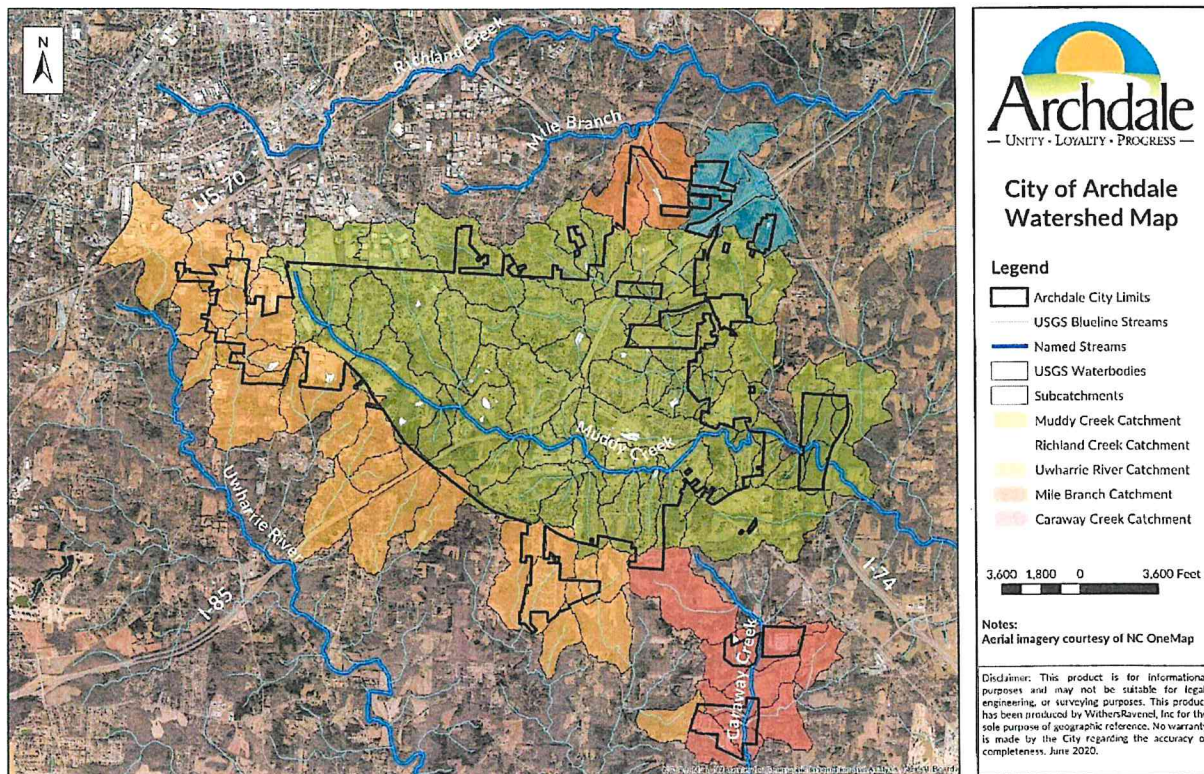
3.1 Permitted MS4 Area

This SWMP applies throughout the corporate limits of the City of Archdale, including all regulated activities associated with the discharge of stormwater from the MS4. The map below shows the corporate limits of the City of Archdale as of the date of this document.



3.2 Existing MS4 Mapping

The current MS4 mapping includes a depiction 2 segments of jurisdictional waterways existing within the current jurisdictional city limits. The segments are defined as portions of Muddy Creek [WS-IV 17-(9)-01] and portions of Caraway Creek [Class C 13-2-3]. The existing mapping depicts 5 catchments, 135 sub-catchments, and 518 sub-basins. Between the initial implementation of the ACE Integrated Stormwater Management Program, the length of jurisdictional miles increased from 5.89 to 6.31 miles with the Annexation of a future development area known as the former Spillman Christmas Tree Farm circa, 2006. The length of jurisdictional waters within the corporate city limits of Archdale has not changed since the implementation of existing Stormwater Management Plan on January 2, 2008 and remains at 6.31 miles.



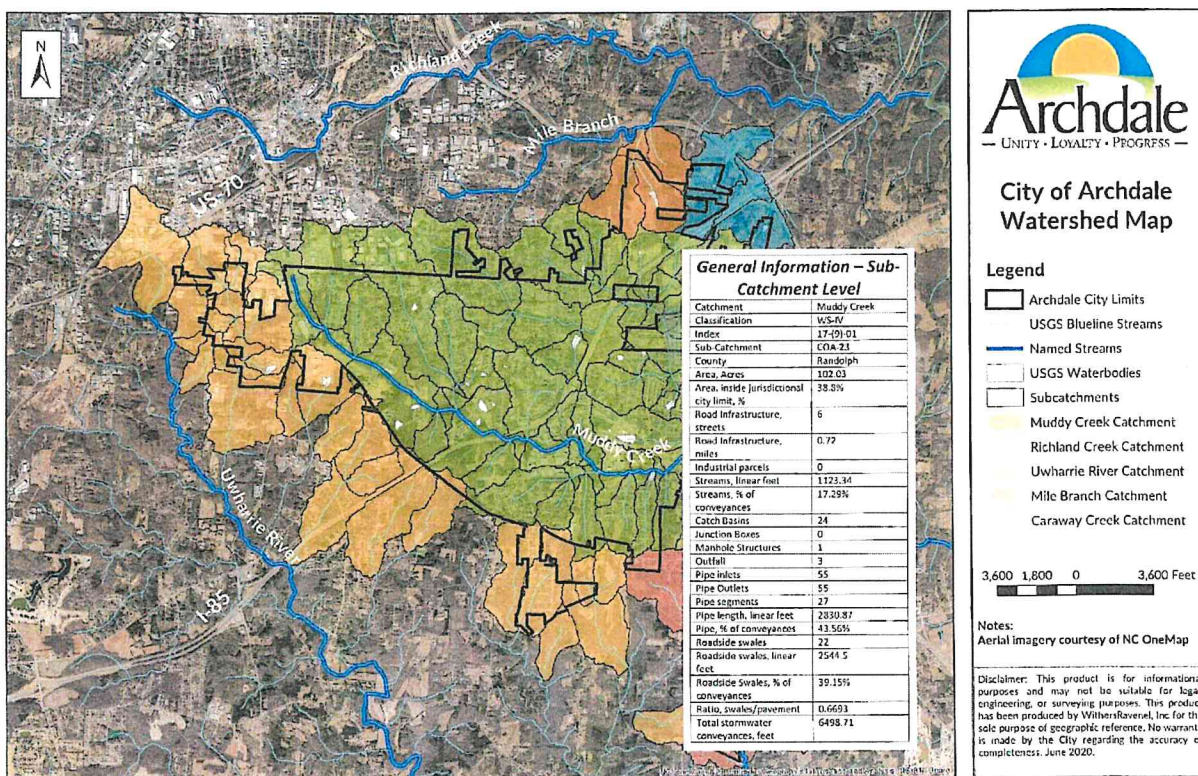


Table 1: Summary of MS4 Mapping

Percent of MS4 Area Mapped	100	%
No. of Major Outfalls* Mapped	20	total

**An outfall is a point where the MS4 discharges from a pipe or other conveyance (e.g. a ditch) directly into surface waters. Major outfalls are required to be mapped to meet permit requirements. A major outfall is a 36-inch diameter pipe or discharge from a drainage area > 50-acres; and for industrial zoned areas a 12-inch diameter pipe or a drainage area \geq 2-acres.*

3.3 Receiving Waters

The City of Archdale MS4 is located within the Cape Fear River Basin and the Yadkin Pee Dee River Basin and discharges directly into receiving waters as listed in Table 2 below. Applicable water quality standards listed below are compiled from the following NCDEQ sources:

- [Waterbody Classification Map](#)
- [Impaired Waters and TMDL Map](#)
- Most recent NCDEQ Final [303\(d\) List](#)

Table 2: Summary of MS4 Receiving Waters

Receiving Water Name	Stream Index / AU Number	Water Quality Classification	303(d) Listed Parameter(s) of Interest
Muddy Creek	17-(9)-01	WS-IV	None
Caraway Creek	13-2-3	Class C	None

3.4 MS4 Interconnection

The City of Archdale MS4 is not interconnected with another regulated MS4 and directly discharges to the receiving waters as listed in Table 2 above.

3.5 Total Maximum Daily Loads (TMDLs)

The TMDL(s) listed in Table 3 below have been approved within the MS4 area, as determined by the map and list provided on the [NCDEQ Modeling & Assessment Unit web page](#). The table also indicates whether the approved TMDL has a specific stormwater Waste Load Allocation (WLA) for any watershed directly receiving discharges from the permitted MS4, and whether a Water Quality Recovery Program has been implemented to address the WLA.

Table 3: Summary of Approved TMDLs

Water Body Name	TMDL Pollutant(s) of Concern	Stormwater Waste Load Allocation (Y/N)	Water Quality Recovery Program (Y/N)
None	None	N	N

3.6 Endangered and Threatened Species and Critical Habitat

Significant populations of threatened or endangered species and/or critical habitat are not identified within the regulated MS4 urbanized area, as determined by a review of the [Endangered and Threatened Species and Species of Concern by County for North Carolina Map](#) and [Listed species believe to or known to occur in North Carolina map](#) as provided by the [U.S. Fish and Wildlife Service](#). Of those species listed, Table 4 summarizes the species that may be significantly impacted by the quality of surface waters within their habitat.

Table 4: Summary of Federally Listed Species/Habitat Impacted by Surface Water Quality

Scientific Name	Common name	Species Group	Federal Listing Status
None	None	None	None

3.7 Industrial Facility Discharges

The City of Archdale MS4 jurisdictional area includes the following industrial facilities which hold NPDES Industrial Stormwater Permits, as determined from the NCDEQ [Active NPDES Stormwater Permit List](#) and/or [Active Stormwater Permits Map](#).

Table 5: NPDES Stormwater Permitted Industrial Facilities

Permit Number	Facility Name
NCG080184	United Parcel Service Inc, 1205 Corporation Drive
NCG030009	Thomas Built Busses Inc 715 W Fairfield Road
NCGNE510	Hubbell ICD 4301 Cheyenne Drive
NCGNE0024	Costa & Grissom Machinery Co 107 Seminole Drive
NCGNE0748	Ornamental Products LLC 3804 Commanche Drive
NCGNE1244	Brookline Furniture Company LLC 4014 Cheyenne Drive
NCGNE1242	Brookline Furniture Company LLC 4012 Cheyenne Drive
NCGNE1245	Brookline Furniture Company LLC 4015 Cheyenne Drive

3.8 Non-Stormwater Discharges

The water quality impacts of non-stormwater discharges have been evaluated by the MS4name as summarized in Table 6 below. The unpermitted non-stormwater flows listed as incidental do not significantly impact water quality. The MS4name has evaluated residential and charity car washing and street washing for possible significant water quality impacts.

Street washing discharges are addressed under the Pavement Management Program in Part 10 of this SWMP. The Division has not required that other non-stormwater flows be specifically controlled by the City of Archdale

Wash water associated with car washing that does not contain detergents or does not discharge directly into the MS4 is considered incidental. However, these types of non-stormwater discharges that do contain detergents have been evaluated by the MS4name to determine whether they may significantly impact water quality. Based on the community needs and observations, the City of Archdale has not observed residential and charity car washing and street wash water usage which would justify moving from “incidental” to “possible.”

Table 6: Non-Stormwater Discharges

Non-Stormwater Discharge	Water Quality Impacts
Water line and fire hydrant flushing	Incidental
Landscape irrigation	Incidental
Diverted stream flows	Incidental
Rising groundwater	Incidental
Uncontaminated groundwater infiltration	Incidental
Uncontaminated pumped groundwater	Incidental
Uncontaminated potable water sources	Incidental
Foundation drains	Incidental
Air conditioning condensate	Incidental
Irrigation waters	Incidental
Springs	Incidental
Water from crawl space pumps	Incidental
Footing drains	Incidental
Lawn watering	Incidental
Residential and charity car washing	Incidental
Flows from riparian habitats and wetlands	Incidental
Dechlorinated swimming pool discharges	Incidental
Street wash water	Incidental
Flows from firefighting activities	Incidental

3.9 Target Pollutants and Sources

In addition to those target pollutants identified above, the City of Archdale is not aware of other significant water quality issues within the permitted MS4 area. The City of Archdale continues to monitor non-point source items of trash, sediment transport (non construction), and petroleum products on the roads due to visitors traveling through Main Street to access I-85. Currently, construction in the city has been limited to three restaurants and approximately 65 residential homes located in the Muddy Creek catchment and the Caraway Creek catchment.

Table 7 below summarizes the water quality pollutants identified throughout Part 3 of this SWMP, the likely activities/sources/targeted audiences attributed to each pollutant, and identifies the associated SWMP program(s) that address each. In addition, the MS4name has evaluated schools, homeowners and businesses as target audiences that are likely to have significant stormwater impacts.

Based on the evaluation of schools, homeowners and businesses as target audiences, no significant stormwater impacts exist as a result of community needs and the target pollutants for those that are minimal based on observations.

Table 7: Summary of Target Pollutants and Sources

Target Pollutant(s)	Likely Source(s)/Target Audience(s)	SWMP Program Addressing Target Pollutant(s)/Audience(s)
<i>Litter</i>	<i>Residents, Businesses, Schools</i>	<i>Public Education & Outreach</i>